

1. This document was created to support maximum accessibility for all learners. If you would like to print a hard copy of this document, please follow the general instructions below to print multiple slides on a single page or in black and white.
2. This handout is for reference only. Non-essential images have been removed for your convenience. Any links included in the handout are current at the time of the live webinar, but are subject to change and may not be current at a later date.
3. Copyright: Images used in this course are used in compliance with copyright laws and where required, permission has been secured to use the images in this course. All use of these images outside of this course may be in violation of copyright laws and is strictly prohibited.
4. Social Workers: For additional information regarding standards and indicators for cultural competence, please review the NASW resource: [Standards and Indicators for Cultural Competence in Social Work Practice](#)
5. Need Help? Select the “Help” option in the member dashboard to access FAQs or contact us.

How to print Handouts

On a Mac

- Open PDF in Preview
- Click File
- Click Print
- Click dropdown menu on the right “preview”
- Click layout
- Choose # of pages per sheet from dropdown menu
- Checkmark Black & White if wanted.

On a PC

- Open PDF
- Click Print
- Choose # of pages per sheet from dropdown menu
- Choose Black and White from “Color” dropdown

No part of the materials available through the continued.com site may be copied, photocopied, reproduced, translated or reduced to any electronic medium or machine-readable form, in whole or in part, without prior written consent of continued.com, LLC. Any other reproduction in any form without such written permission is prohibited. All materials contained on this site are protected by United States copyright law and may not be reproduced, distributed, transmitted, displayed, published or broadcast without the prior written permission of continued.com, LLC. Users must not access or use for any commercial purposes any part of the site or any services or materials available through the site.

A solid red square is located in the bottom left corner of the page.

Unleashing the Power of Conversation

IX

Integrated
Xperience

Be
Brilliant™



signia



Navid Taghvaei, MA, AuD, ABAC, CCC-A
Sr. Clinical Education Specialist

Disclosure: I have the following relevant financial relationship in the products or services described, reviewed, evaluated or compared in this presentation.

I am a Sr. Clinical Education Specialist with the Education and Training team for Signia, for which I receive a salary. I have no relevant nonfinancial relationship(s) to disclose.

Learning Outcomes

- After this course, participants will be able to describe multi-stream architecture and how it works.
- After this course, participants will be able to define Realtime Conversation Enhancement and the IX technology.
- After this course, participants will be able to Audiological solutions available in the current Integrated Xperience platform.



The Signia Research Network

- Hundreds of publications across multiple centers involving 1000s of participants
- Multi-modal objective and subjective data with a holistic focus:
 - Physiological
 - Neural
 - Behavioral
- Working to improve conversation is at the core of what we do





Signia Integrated Xperience

Unleash the Power
of Conversation



signia

Be
Brilliant™

How Many Times Have You Heard Patients Say...?

"I can feel isolated from my surroundings"

"If there are multiple people talking, I can't keep up"

"If am not facing the speaker in noise, I miss out"

"I can't hear conversation clearly if there is background noise"



Group Conversation in Noise is Difficult...



Group conversations in noise are the biggest unmet need for people with hearing loss

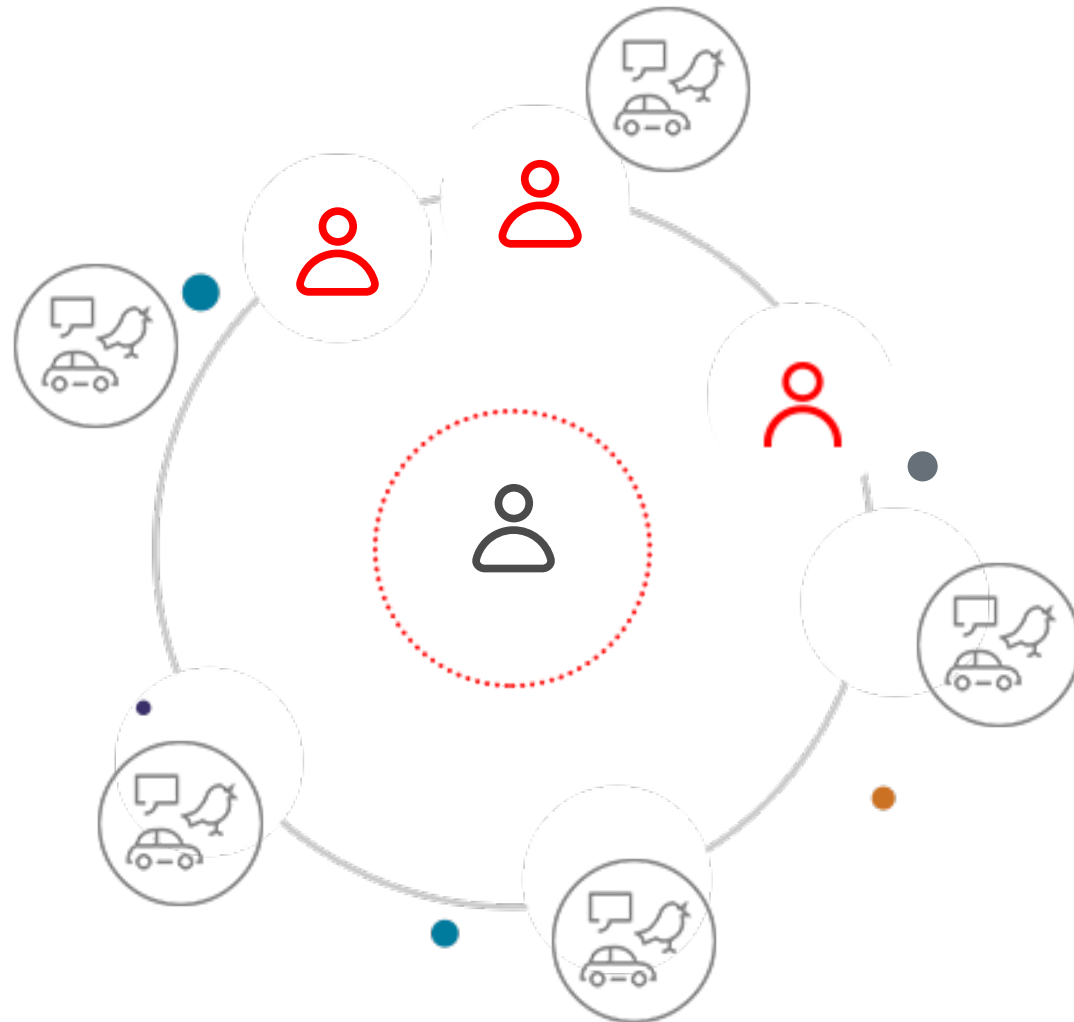
Can lead to frustration, isolation and ultimately withdrawal

They miss out on the moment, we miss out on their contribution to the conversation

* Visit signia-pro.com/en-us/claims-data for more details

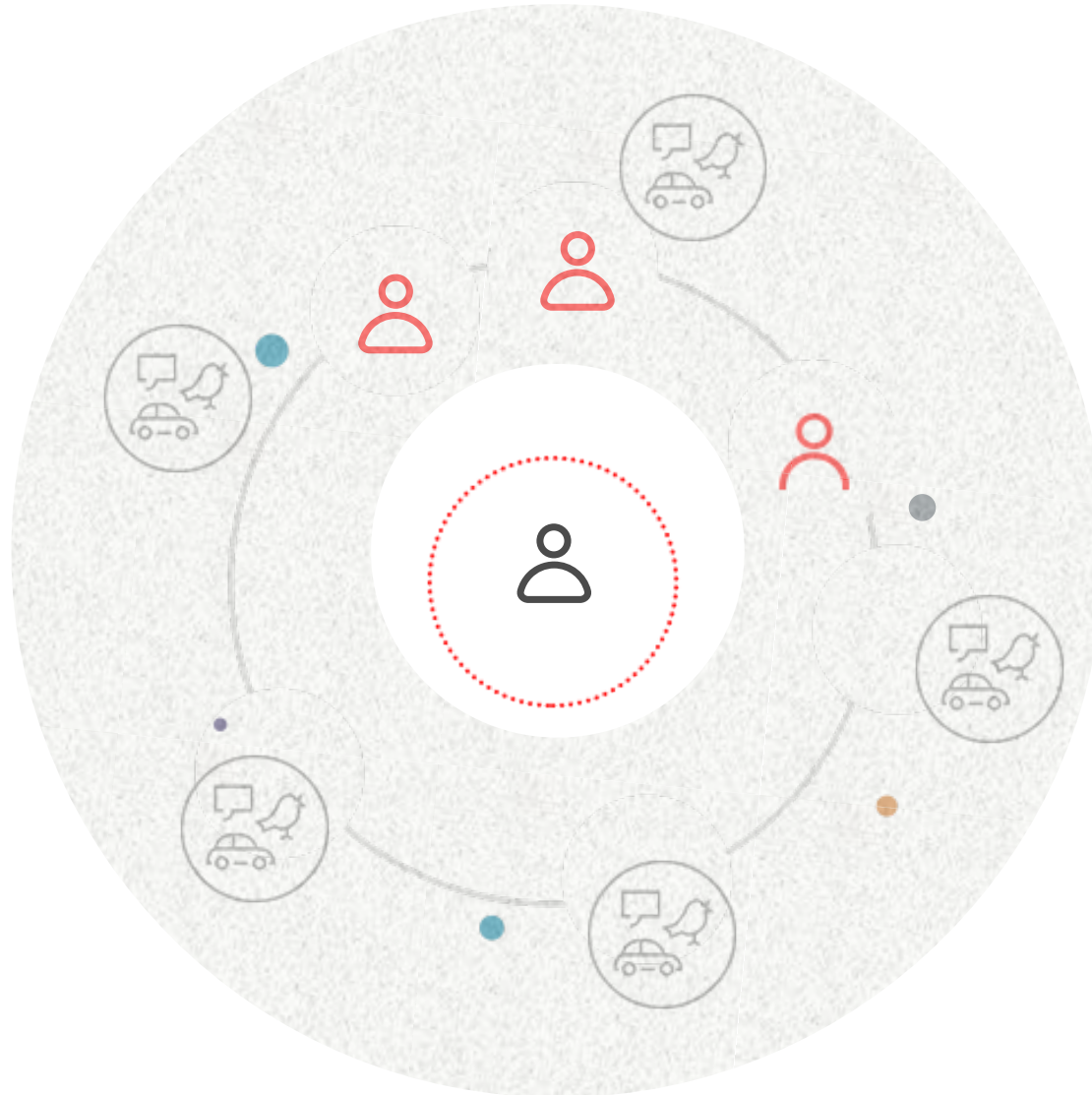


Traditional Approaches Fall Short



Traditional Approaches Fall Short

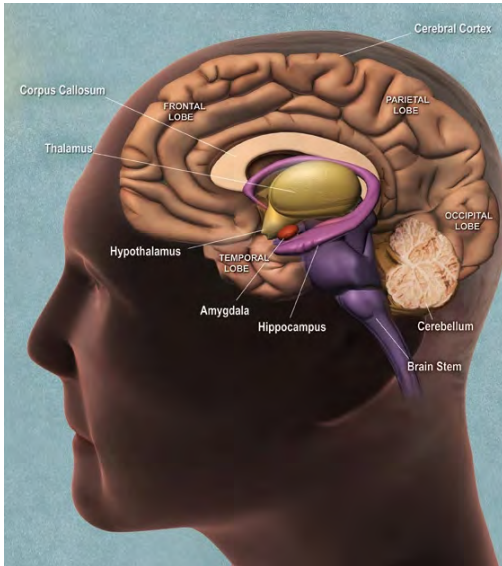
Broad Focus



“Preserve Speech” Philosophy

Advantages:

- Leverages innate top-down processing power of the human brain
- Algorithms that “super-charge” audibility



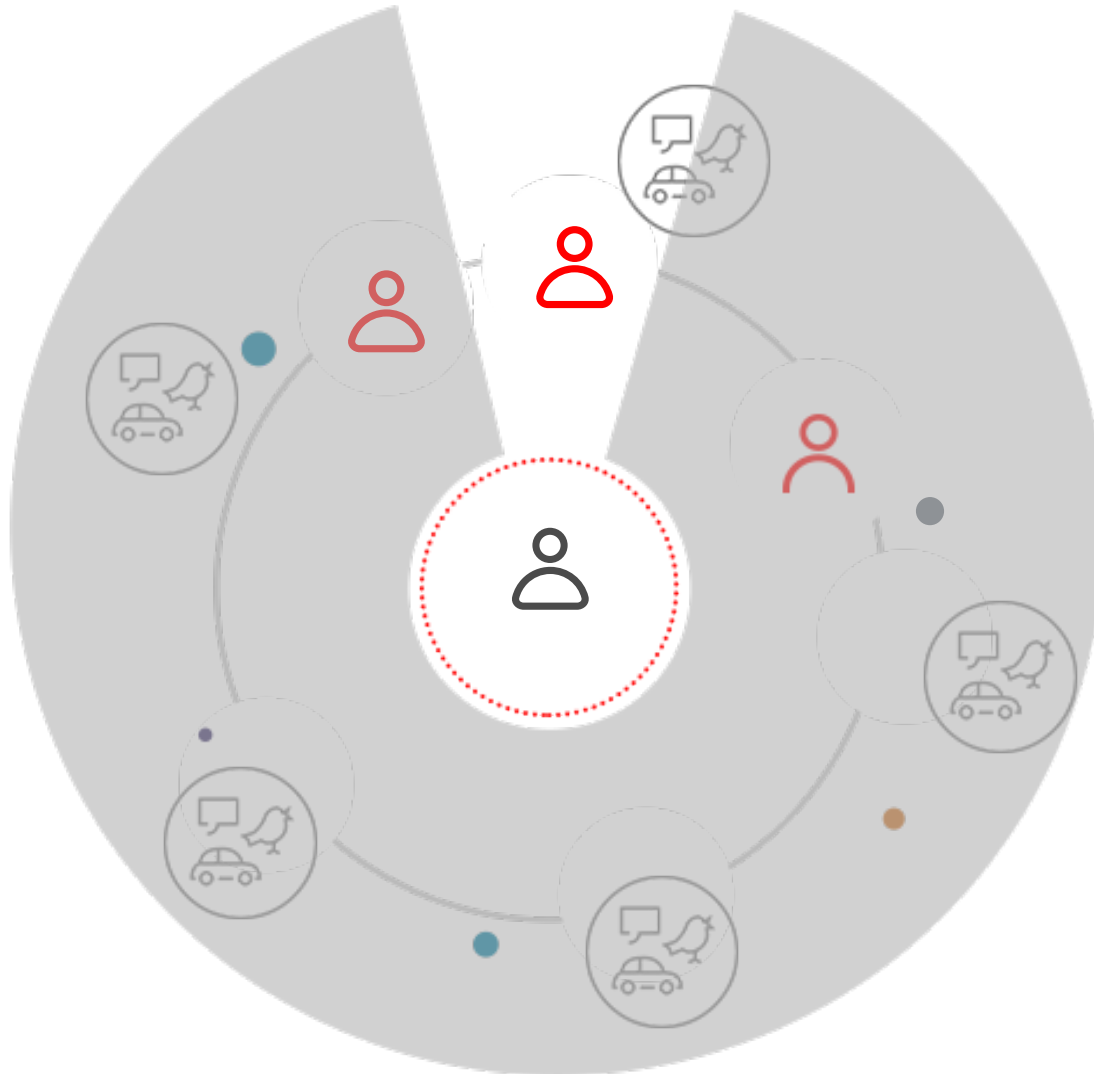
Limitations:

- High noise situations (- 5 dB or worse) where noise tends to overwhelm speech cues



Traditional Approaches Fall Short

Narrow Focus



“Enhance Speech” Philosophy

Advantages:

- Improves the SNR to give the auditory system a better chance of pulling speech from the noise



Constantly scanning

Limitations:

- Some important speech cues – embedded in the noise – might be sacrificed to gain an SNR advantage



Separating wheat from chaff

Traditional approaches fall short

Unnatural
conversation, isolated
from surroundings, cut
off from others

OR

Access to speakers, but
speech isn't clear due to
background noise

Primary focus is on suppressing noise first and then "preserving" speech



Built on Augmented Focus™ Split Processing



Wearers Need a New Approach that Puts Conversation First

Adapts to and enhances
all conversation partners in real time

Preserves
the surrounding sounds
keeping them comfortable



IX



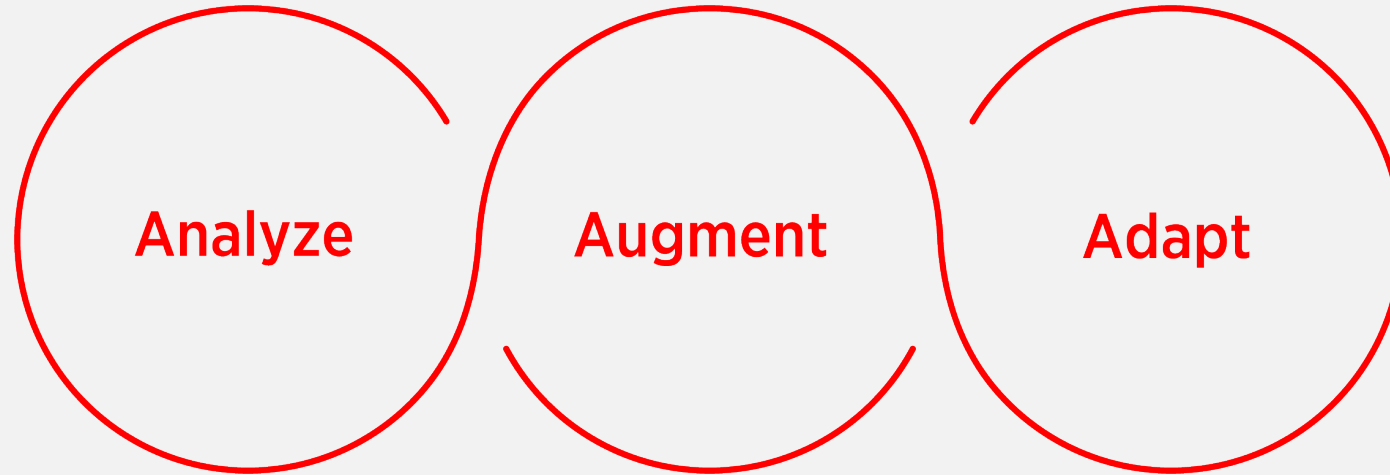
Introducing Signia Integrated Xperience with RealTime Conversation Enhancement

A breakthrough approach to address the long-standing challenges faced by hearing aid wearers



Signia IX with RealTime Conversation Enhancement

A revolutionary three stage process that puts conversation first:



The world's first hearing aid with a multi-stream architecture capable of accurately pinpointing multiple moving speakers in real-time conversation



Analyze

Analyze

Individual
Speakers

Location/Proximity
Speech level

Conversation
Dynamics

Turn-taking
Timing

Surrounding
Sound

Noise Level
Location

Analyzes 192,000 datapoints every second



Analyze: Conversation Analyzer

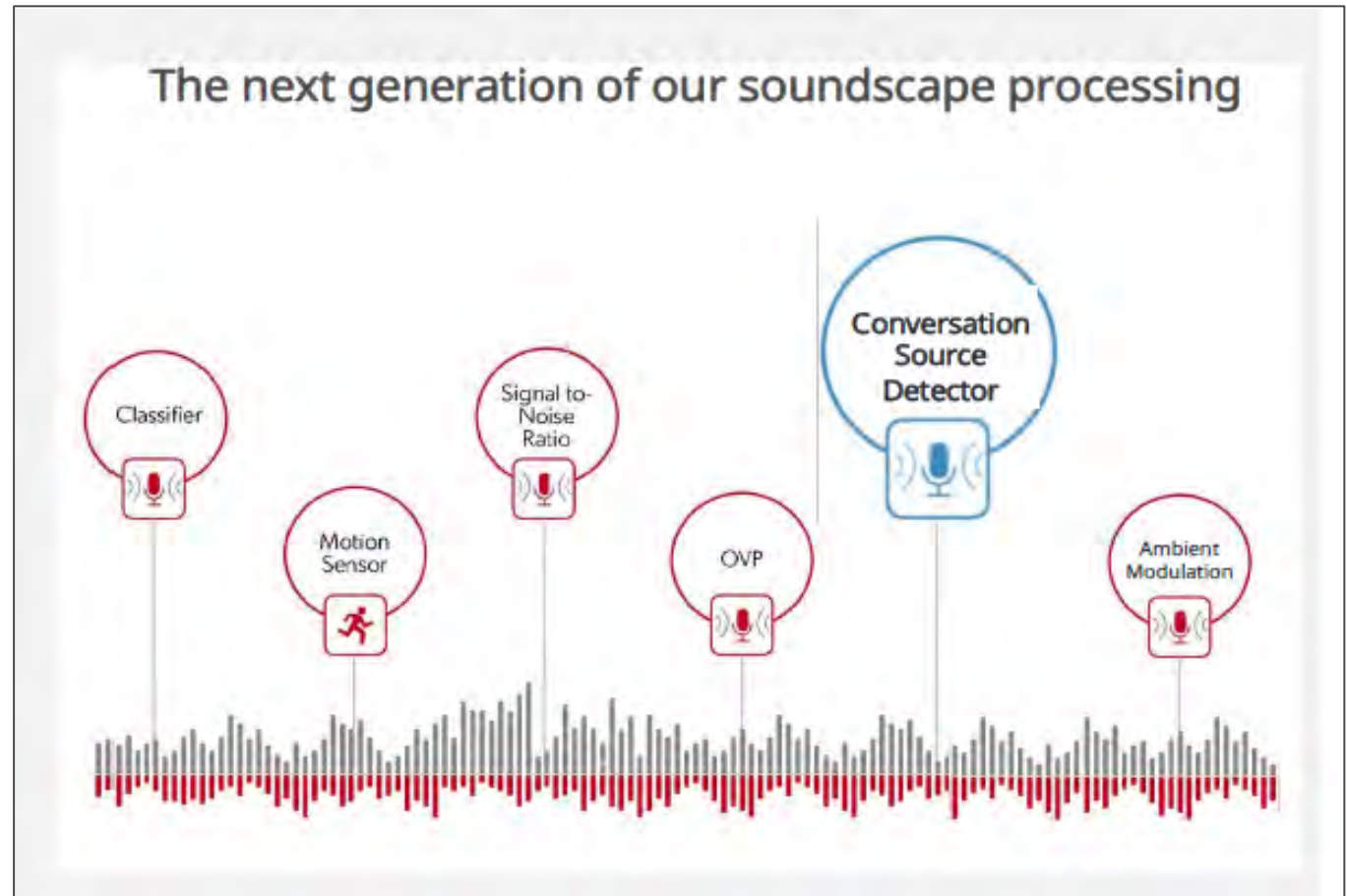
The Conversation Analyzer can be divided into two components:

1. Conversation Source Analyzer constantly scouts the acoustic environment to identify number of talkers and their location
2. Conversation Dynamics Analyzer analyzes conversation dynamics including turn-taking and timing, locations of pure noise without speech, and levels of background noise

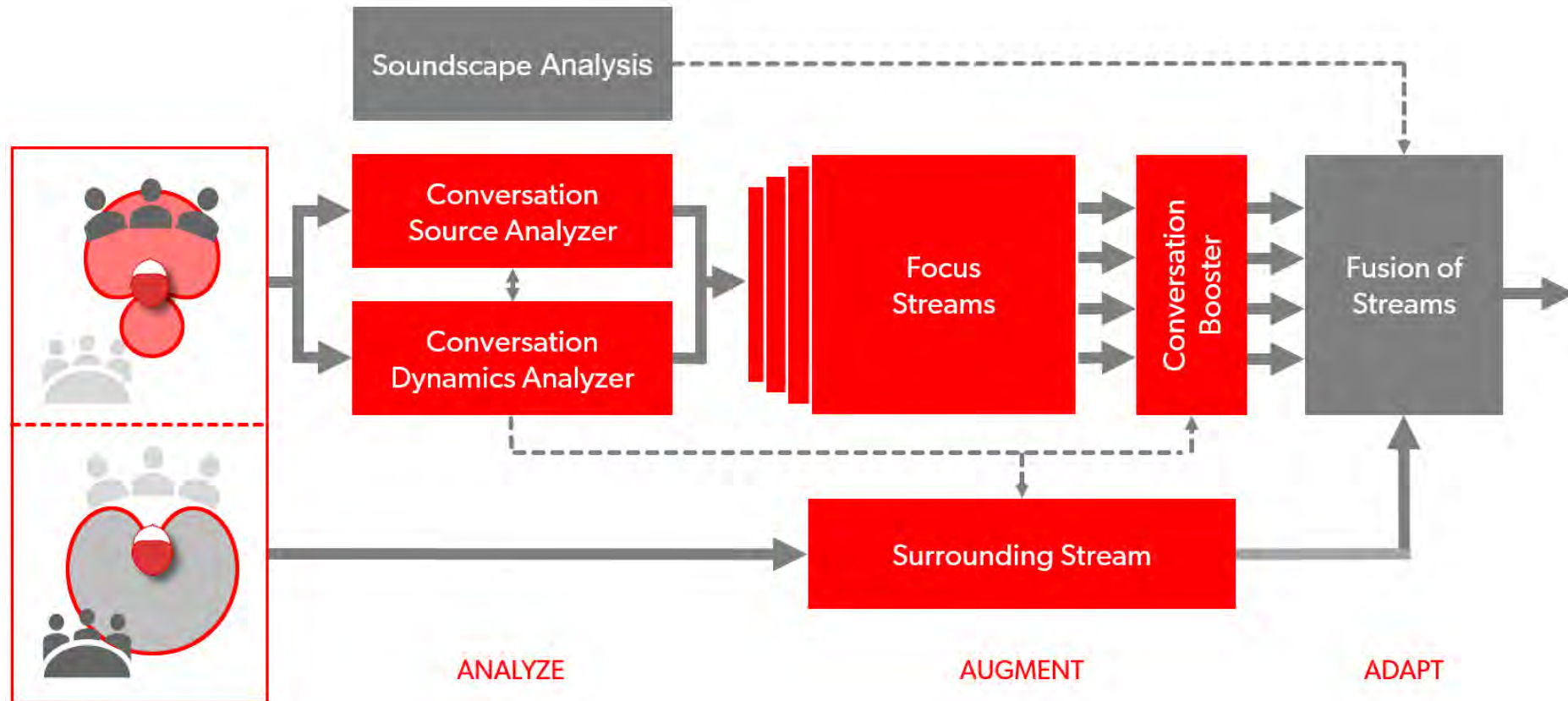


The Industry-First Conversation Source Detector

Soundscape Analysis



RealTime Conversation Enhancement





Augment

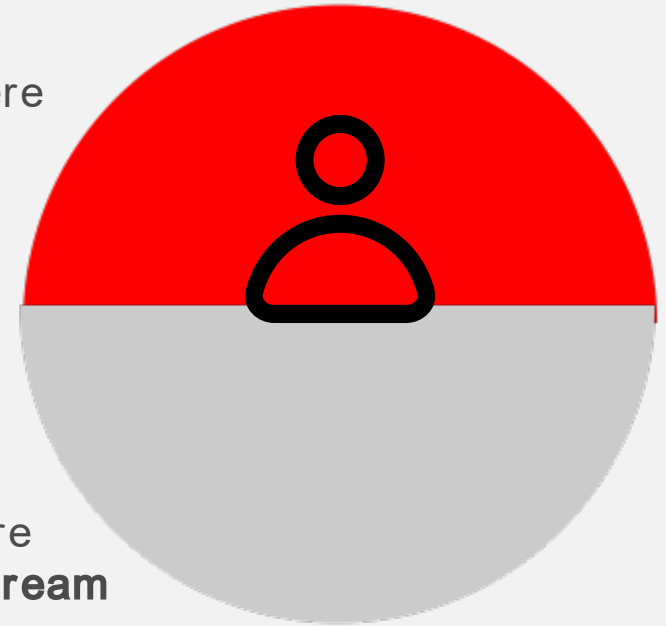


Augment: Focus Streams

RealTime Conversation
Enhancement is made possible
by the split processing capability
of **Augmented Focus**

Front hemisphere
focus stream

Back hemisphere
surrounding stream



Augment: Focus Streams

RealTime Conversation Enhancement adds **up to three additional advanced focus streams**

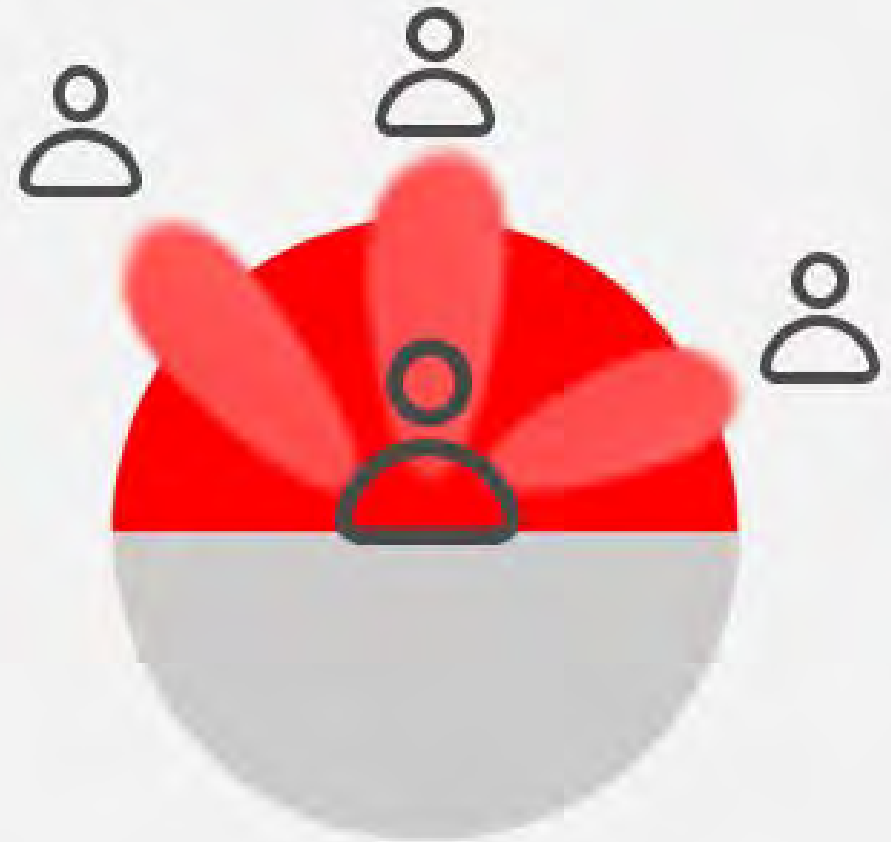
Each additional focus stream operates independently within a specific region in the front hemisphere and **change width and orientation**



Augment: Focus Streams

Each focus stream operates independently.

Not limited in number, but for example, three **simultaneous** talkers, each located within the region of a different focus stream, could be targeted for enhancement simultaneously.



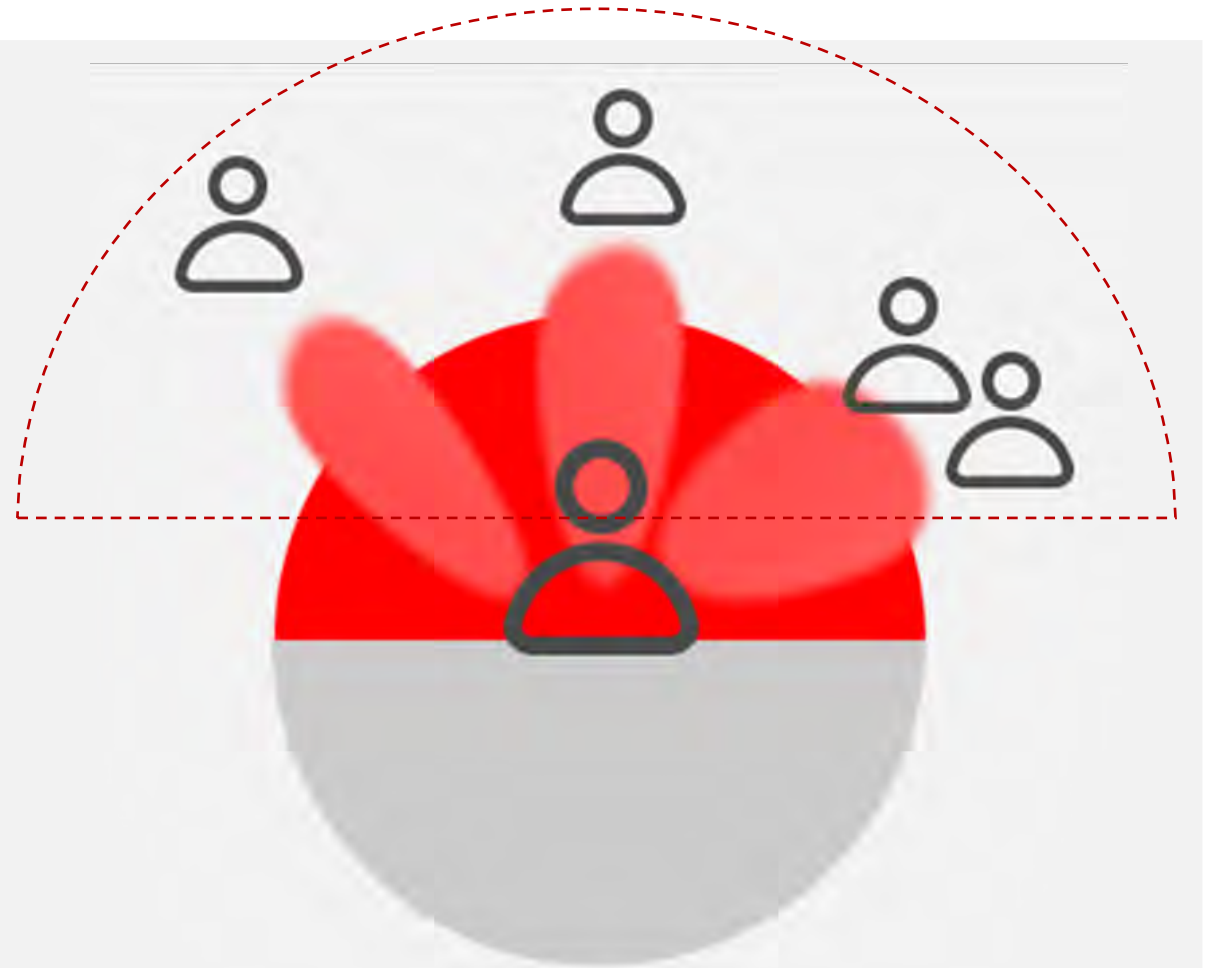
Augment: Focus Streams

If multiple talkers are located within one region, the analysis of conversational dynamics such as **turn-taking and timing** is used to shape the binaural beamformer in a way that preserves sensitivity in the direction of a known conversation partner, even when they are not speaking.



Augment: Focus Streams

Proximity analysis is used to ensure that only speech originating within an expected conversational distance (approx. 2 meters) will be enhanced within the focus stream.



Augment: Conversation Booster in Detail

The Conversation Booster

- Looks across all focus streams in combination — including the Augmented Focus front hemisphere stream
- Determines the optimal amount and balance of speech enhancement and noise reduction to augment speech while preserving the acoustic environment

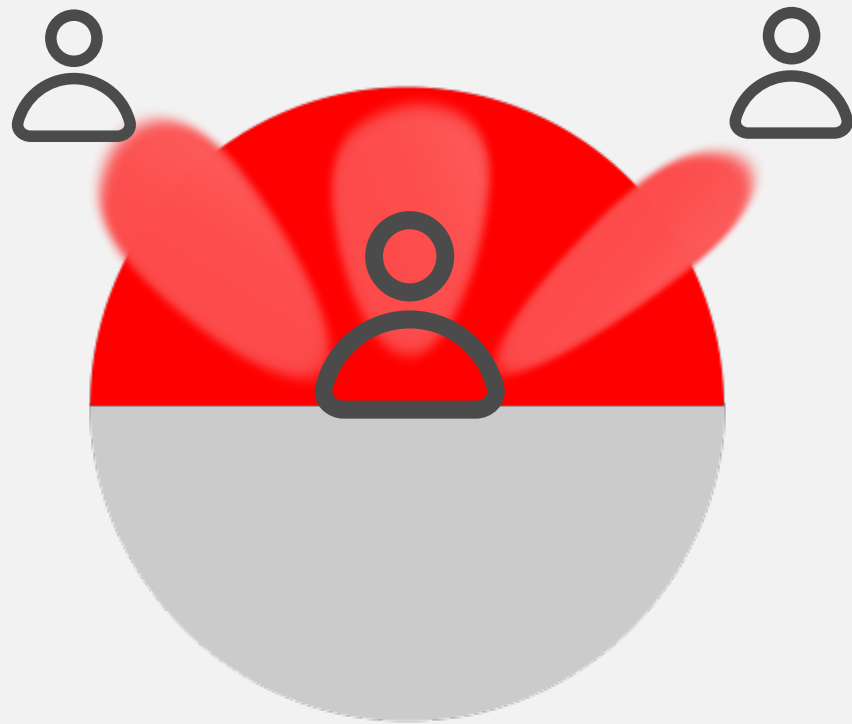




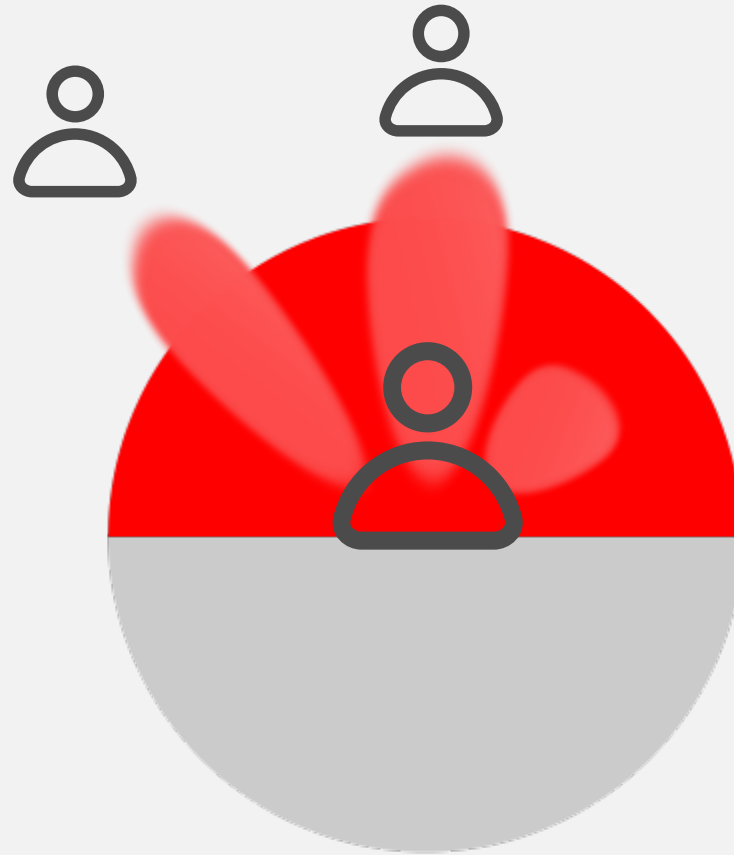
Adapt



Adapt



Adapt



Adapt



Updating 1000 times a second



Further Personalization via DSP 3.0

RealTime Conversation Enhancement is a part of **Dynamic Soundscape Processing 3.0**.

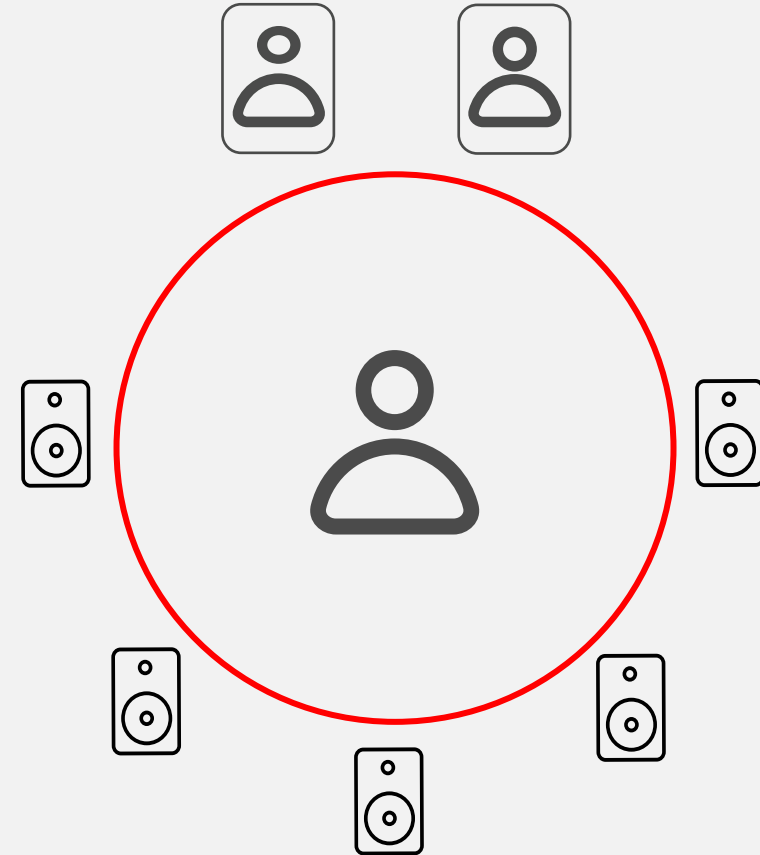
This means that it can be affected by adjusting the **Dynamic Soundscape Processing slider in Connexx** by the HCP and by wearer's response inputs made via the **Signia Assistant** in the Signia App



95% of Wearers had Improved Performance in a Group Conversation Scenario*

**Group conversation
scenario...not your typical
lab setup**

* Compared to RealTime Conversation Enhancement off



RealTime Conversation Enhancement Benefits

A comfortable, immersive conversational experience without distractions

Access to multiple speakers with speech that pops above the surrounding sound

Keep up and contribute to the conversation



Integrated Xperience Form Factors



signia

Be
Brilliant™

Setting a New Benchmark for Rechargeable Hearing Aids



Pure Charge&Go IX &
Pure Charge&Go TIX



signia

Be
Brilliant™

Advanced Hearing Technology with Thoughtful Design

Pure Charge&Go IX & Pure Charge&Go T IX

7IX

5IX

3IX

sDemo*

* TIX only

CROS

Pure Charge&Go IX



Pure Charge&Go T IX



Pure C&G IX reliability



hydrophobic & oleophobic protection



Patented anti-capillary design



IP 68 rating

I – 6: dust tight, no ingress of dust after 2h
P – 8: still functional after immersion in 1 meter of water for 1h



Colors

sDemo



Same 10 color choices as AX

Receiver Strengths*

S-Receiver	M-Receiver	P-Receiver	HP-Receiver
46 dB / 110 dB SPL	60 dB / 119 dB SPL	65 dB / 122 dB SPL	75 dB / 131 dB SPL

* Compatible with EarWear 3.0



Pure Charge&Go IX



Up to 28 hrs runtime / 24 hours runtime w/ 5 hrs of streaming



Up to additional 6 hrs of runtime with 30-minute fast charge

7IX

5IX

3IX

sDemo*

CROS



Pure Charge&Go T IX



Up to 39 hrs runtime / 34 hrs runtime w/ 5 hrs of streaming



Up to 6 hrs of additional runtime with a 30-minute fast charge

7IX

5IX

3IX

sDemo*

CROS



CROS Pure Charge&Go IX



CROS Pure Charge&Go IX

- Compatible with all performance levels 7/5/3

CROS battery runtime

- Up to 29 hours without streaming



Chargers Options

NEW!

Multi Charger

(default charger for sDemo)



Standard Charger



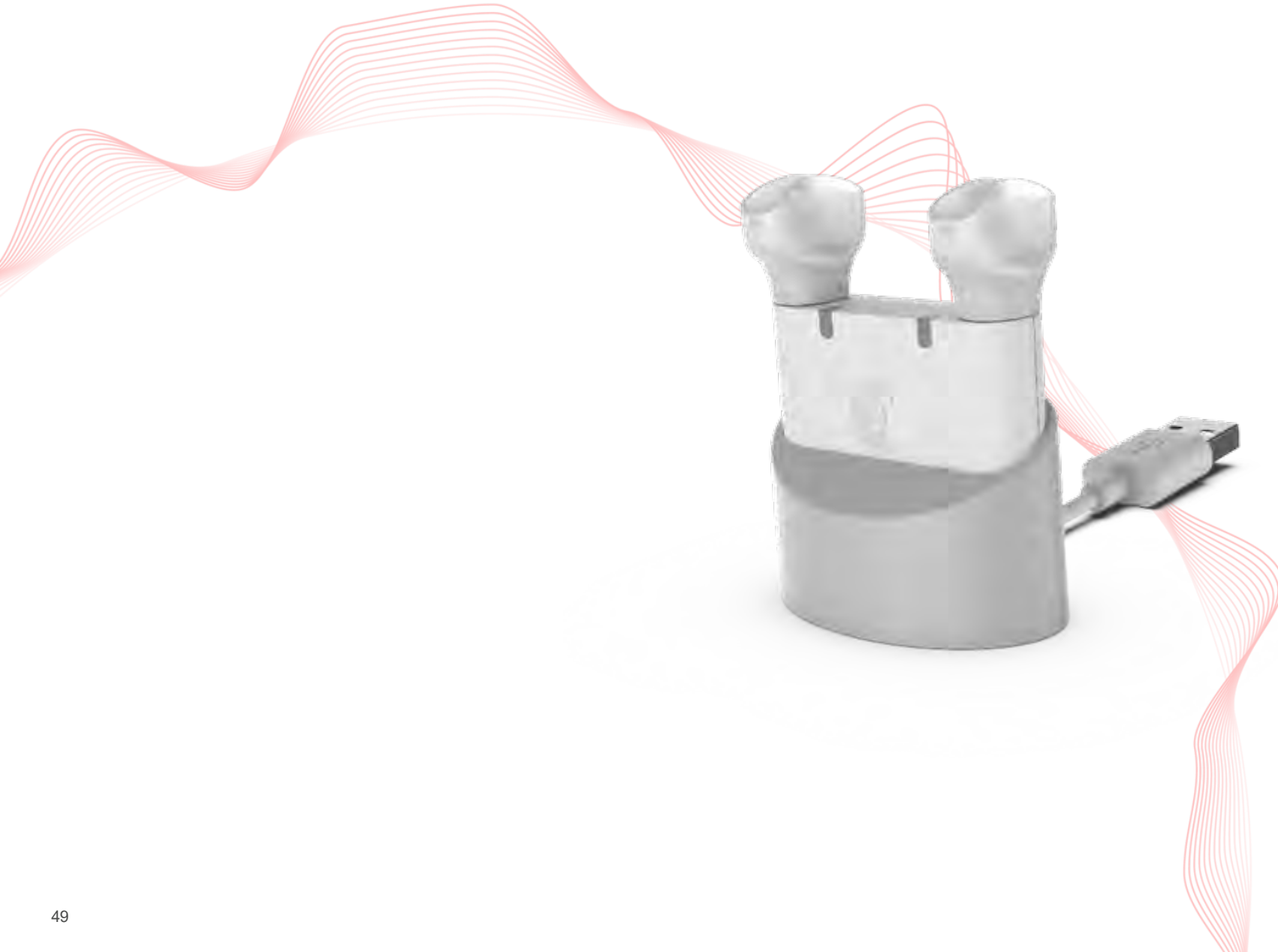
Portable Charger



Dry & Clean Charger



Optional stand for Multi Charger



Accessories

StreamLine™ Mic



StreamLine™ TV



miniPocket



Pure Charge&Go IX connectivity



* Future firmware update required



Silk Charge&Go IX



signia

Be
Brilliant™

Seamless Hearing with Discretion

Silk Charge&Go IX

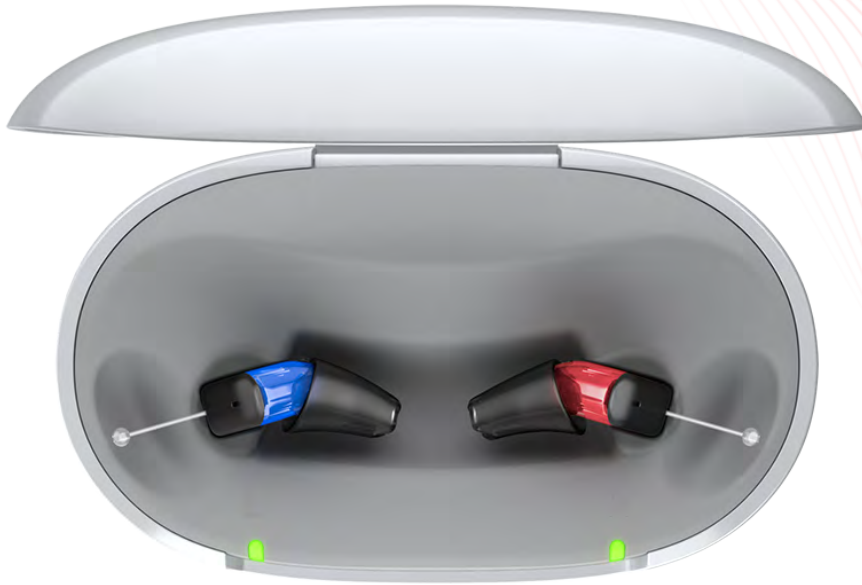
7IX

5IX

3IX

sDemo

CROS



- ✓ Upgraded to Integrated Xperience architecture offering a full 20% increase in computational power*
- ✓ Now with the convenience of rechargeability on the go!
- ✓ All without compromising on size or performance

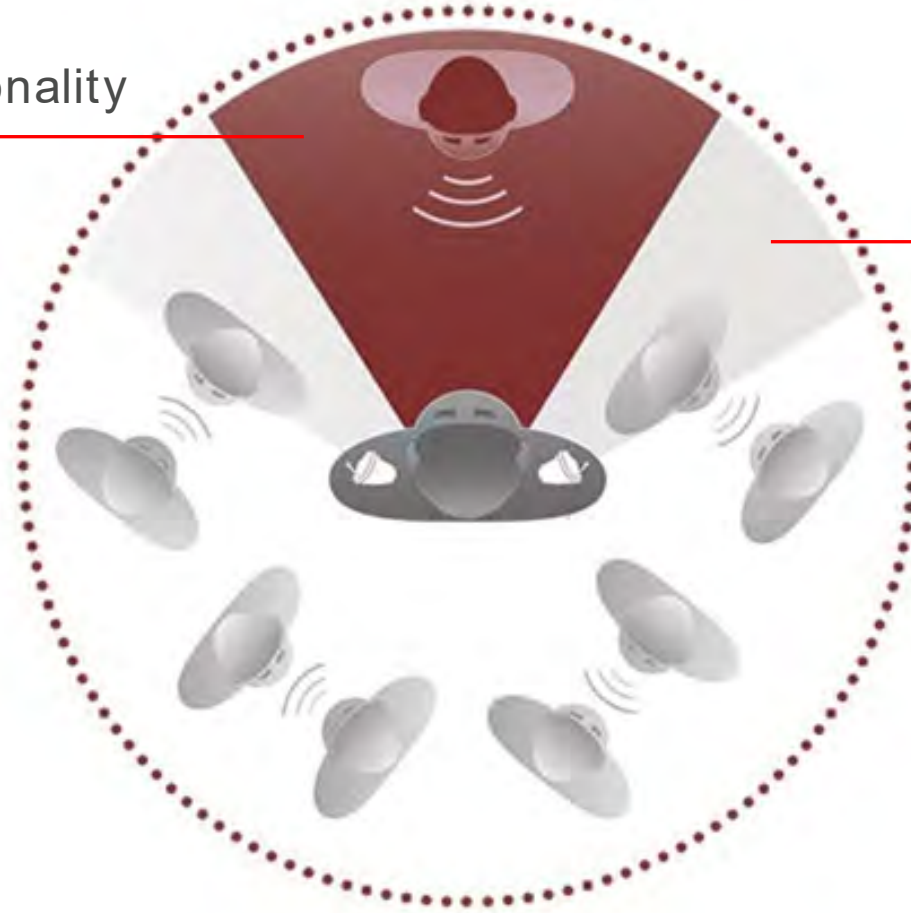
* compared to Silk X



The Only CIC With Binaural OneMic Directionality

Binaural OneMic Directionality

Natural pinna effect



Rechargeability Without Compromise

Silk Charge & Go IX



Fits mild to moderate hearing loss
50dB/114 dB SPL (2ccm coupler)

Power to hear all day

*Up to 28 hours on a single charge
30-min fast charge provides additional 7 hours*

Binaural OneMic Directionality

Focus on the speaker in a noisy environment

Unmatched Discretion

The soft, textured faceplate surface avoids reflections for added discretion

Convenient Control

Signia App or miniPocket via acoustic pairing



Thoughtful Design for Ease of Use

Silk Charge&Go IX



Wireless Programming via ConnexxAir

Silk Charge&Go IX



RealTime Conversation Enhancement Benefits

A comfortable, immersive conversational experience without distractions

Access to multiple speakers with speech that pops above the surrounding sound

Keep up and contribute to the conversation



Thank you!

Be
Brilliant™



signia